AMENDMENTS TO THE CLAIMS

Please amend the claims to be as follows.

1. (currently amended) A method for encoding and decoding a video sequence in which a keyframe is used to bi-directionally predict frames in the sequence, the method comprising:

coding the keyframe independently of other frames in the sequence; and

predicting a prior frame occurring before the keyframe using data from the keyframe and not from any other keyframe; and

predicting a subsequent frame occurring after the keyframe using the data from the keyframe and not from any other keyframe.

2. (original) The method of claim 1, wherein the keyframe is selected from a middle of a group of pictures to be encoded.

3. (currently amended) The method of claim 2, wherein the method further comprises:

predicting in series all prior frames within the group of pictures that occur before the keyframe using data from the keyframe and not from any other keyframe.

4. (currently amended) The method of claim 3, wherein the method further comprises:

predicting in series all subsequent frames within the group of pictures that occur ~~before~~ after the keyframe using data from the keyframe and not from any other keyframe.

5. (currently amended) The method of claim 1, wherein at least one prior intervening frame occurs between the keyframe and the prior frame, and wherein the method further comprises:

bi-directionally predicting the prior intervening frame using the data from the keyframe and data from the prior frame, without using data derived from any other keyframe.

6. (currently amended) The method of claim 5, wherein at least one subsequent intervening frame occurs between the keyframe and the subsequent frame, and wherein the method further comprises:

bi-directionally predicting the subsequent intervening frame using the data from the keyframe and data from the subsequent frame, without using data derived from any other keyframe.

7. (original) A method for allocating bits to a keyframe during video encoding, wherein effects of a plurality of keyframe bit allocations on quality of a predicted frame are measured, and wherein said effects are used to determine a near optimal keyframe bit allocation.

8. (original) The method of claim 7, wherein bits not allocated to the keyframe are allocated for use in residue coding to repair imperfections arising during motion-compensated prediction of frames dependent on the keyframe.

9. (original) The method of claim 7, wherein the method comprises:

encoding the keyframe using a plurality of bit allocations;

decoding each of the plurality of encoded keyframes to produce a plurality of decompressed keyframes;

predicting a next predicted frame using each of the plurality of decompressed keyframes;

determining a relative quality of each predicted frame derived from each keyframe bit allocation;

interpolating the quality of prediction for each keyframe bit allocation within a certain range; and

selecting a specific keyframe bit allocation that achieves a predetermined slope on the quality versus bit allocation curve.